WHAT IS CLAIMED IS:

1. A method of identifying a modulator of angiogensis comprising:

(a) culturing a plurality of stem cells in the presence of a test compound, for a time and under conditions suitable for the growth endothelial cells; and

(b) comparing the amount of microvessel outgrowth from said stem cells in the presence of said test compound as compared to a control amount of microvessel outgrowth,

wherein if said microvessel outgrowth is greater or less than said control level of microvessel outgrowth, the test compound is identified as a modulator of angiogenesis.

2. The method of claim 1, wherein said stem cells are cultured with a vessel section.

3. The method of claim 1, wherein said stem cells are cultured with a plurality of tumor cells.

4. The method of claim 3, wherein said tumor cells are cells of a tumor cell line.

5. The method of claim 1, wherein said stem cells are additionally cultured in the presence of hydrocortisone, epidermal growth factor, or bovine brain extract.

6. The method of claim 1, wherein said modulator of angiogenesis is identified as an anti-angiogenic agent.

7. The method of claim 1, wherein said modulator of angiogenesis is identified as an angiogenic agent.

8. The method of claim 1, wherein said culturing of a plurality of stem cells in the presence of a test compound is for at least seven days.

9. The method of claim 1, wherein said culturing of a plurality of stem cells in the presence of a test compound is for at least fourteen days.

10. The method of claim 1, wherein said stem cells are cultured on a matrix that comprises fibrin.

11. The method of claim 1, wherein said stem cells are cultured in a physiological gel that comprises fibrin.

12. The method of claim 1, wherein said stem cells are cultured in a physiological gel that comprises non-denatured collagen.

13. A method of identifying a modulator of angiogensis comprising:

(a) culturing a vessel section in the presence of a plurality of tumor cells and a test compound, for a time and under conditions suitable for the growth of endothelial cells and said tumor cells; and

(b) comparing the amount of microvessel outgrowth from said vessel section in the presence of said test compound as compared to a control amount of microvessel outgrowth,

wherein if said microvessel outgrowth is greater or less than said control level of microvessel outgrowth, the test compound is identified as a modulator of angiogenesis.

14. A method of treating an individual, said individual having a disease or condition that is associated with abnormal vessel growth, comprising administering to said individual a therapeutically effective amount of a TNF-α inhibitor.

15. The method of claim 14, wherein said TNF-α inhibitor is an IMiD™.

16. The method of claim 15, wherein said IMiD™ is Actimid™ or Revimid™.

17. The method of claim 14, wherein said disease or condition is cancer.

18. The method of claim 17, wherein said cancer is a metastatic cancer.

19. The method of claim 17, wherein said cancer is breast cancer.

20. The method of claim 14, wherein said disease or condition is selected from the group consisting of inflammation, endometriosis, arthritis, atherosclerotic plaques, diabetic retinopathy, neovascular glaucoma, trachoma, corneal graft neovascularization, psoriasis, scleroderma, hemangioma and hypertrophic scarring, vascular adhesions and angiofibroma.

21. A method of inhibiting angiogenesis, comprising contacting a plurality of cells, said plurality of cells being capable of forming a vessel, with an inhibitor of TNF-α.

22. The method of claim 21, wherein said inhibitor of TNF-α is Actimid™ or Revimid™.

23. The method of claim 21, wherein said plurality of cells is a plurality of cells within an individual.

24. The method of claim 21, wherein said plurality of cells is a plurality of cells in cell culture.